and bending vibration of rectangular piezoelectric vibrators (dual-mode vibrator) in particular is used in various uses because it is capable of moving an object linearly or rotatably by combined vibration of those two vibrations. An ultrasonic motor of a type in which piezoelectric bodies are layered is also used where a high output is required (see Japanese Patent Laid-Open No. Hei. 7-184382).--

Please replace the paragraph beginning at page 1, line 20, with the following rewritten paragraph:

--FIG. 16 shows an ultrasonic motor of a type in which rectangular plate-like piezoelectric bodies are layered. A basic vibrator of the ultrasonic motor comprises piezoelectric bodies 61, 62, 63, 64, 65 and 66 which are polarized in a predetermined manner so as to vibrate in the dual mode and are layered in the polarizing direction, output fetching members 71, 72, 73, 74, 75 and 76 provided on edge portions 61a, 62a, 63a, 64a, 65a and 66a provided in the direction vertical to the polarizing direction of the piezoelectric bodies 61 through 66, and electrodes (not shown) provided on both sides of the piezoelectric bodies 61 through 66. The six piezoelectric vibrators, i.e., the piezoelectric bodies of two rows arrayed in the horizontal direction and stacked in three layers in the vertical direction, are held by coupling means 67, 68 and 69.--

Please replace the paragraph beginning at page 4, line 5, with the following rewritten paragraph:

--In order to achieve the above-mentioned objectives, an inventive ultrasonic motor comprises a first piezoelectric body having a first polarized portion excited when voltage is applied and a second piezoelectric body that is laminated with the first piezoelectric body in the longitudinal direction parallel to the polarizing direction. The second piezoelectric body has a first polarized portion at a position separated from the first polarized portion of the first piezoelectric body in the transverse direction vertical to the polarizing direction, and moves a moving body by stretching vibration and bending vibration caused by vibrations of the first polarized portion of the first piezoelectric body and the first polarized portion of the second piezoelectric body in the longitudinal direction.--

Please replace the paragraph beginning at page 4, line 19, with the following rewritten paragraph:

--The polarized portion of the first piezoelectric body and the polarized portion of the second piezoelectric body excite in the vertical and horizontal directions, respectively. The stretching vibration is then produced when the respective vibrations in the longitudinal direction

overlap and the bending vibration is produced from the implication between the transverse vibrations and the stretching vibration therearound. The moving body is then moved by elliptic vibration obtained by combining the stretching vibration and the bending vibration.--

Please replace the paragraph beginning at page 5, line 14, with the following rewritten paragraph:

--The invention is further characterized in that the first and second piezoelectric bodies have second polarized portions further at positions corresponding to the first polarized portions.

Please replace the paragraph beginning at page 5, line 19, with the following rewritten paragraph:

--Thereby, elliptic vibration for rotating in the reverse direction may be taken out by exciting only the second polarized portions of the respective piezoelectric bodies to produce bending vibration having a different phase, for example. Alternatively, the bending vibration may be amplified by exciting the second polarized portion with a different phase from the first polarized portion in the same time. Accordingly, driving force in both normal and reverse directions may be obtained and the output may be controlled by displacing the bending vibration or by changing the phase.--

Please replace the paragraph beginning at page 6, line 4, with the following rewritten paragraph:

--The invention is further characterized in that a third piezoelectric body which vibrates in the same phase with the stretching vibration is laminated in a body of the ultrasonic motor.--

Please replace the paragraph beginning at page 6, line 13, with the following rewritten paragraph:

--The invention is further characterized in that a third polarized portion that vibrates in the same phase with the stretching vibration is provided between the first polarized portion of the first piezoelectric body and the first polarized portion of the second piezoelectric body at least in either one of the first piezoelectric body and the second piezoelectric body. Thereby, the third polarized portion vibrates in the longitudinal direction in the same phase with the stretching vibration and amplifies the stretching vibration. Accordingly, the high-output ultrasonic motor may be realized.--

Please replace the paragraph beginning at page 7, line 3, with the following rewritten paragraph:

--The invention described is further characterized in that the moving body of the ultrasonic motor is abutted to

the laminated piezoelectric vibrator in the horizontal direction in the.

Paragraph beginning at line 10 of page 7 has been amended as follows:

--The invention is further characterized in that the laminated piezoelectric vibrator is abutted at least at one point of a spherical moving body of the ultrasonic motor described in any one of the foregoing embodiments.--

Please replace the paragraph beginning at page 7, line 14, with the following rewritten paragraph:

--Thereby, the spherical moving body may be moved about an arbitrary axis by applying a driving force to one point of the spherical moving body by the laminated piezoelectric vibrator or may be moved arbitrary by applying a driving force to a plurality of points.--

Please replace the paragraph beginning at page 7, line 19, with the following rewritten paragraph:

--The invention is further characterized in that an electronic apparatus equipped with the ultrasonic motor comprises the ultrasonic motor described in any one of the foregoing embodiments. Thereby, the electronic apparatus

equipped with the ultrasonic motor having the ultrasonic motor as a driving source may be realized.--

Please replace the paragraph beginning at page 12, line 3, with the following rewritten paragraph:

--Planar electrodes 21 are fixed on one end face of the respective piezoelectric bodies 11A through 11E at a region corresponding to polarization and reference electrodes 22 are fixed on the face of the respective piezoelectric bodies 12A through 12E facing [to] the planar electrodes 21 of the piezoelectric bodies 11A through 11E as counter electrodes.--

Please replace the paragraph beginning at page 12, line 13, with the following rewritten pargraph:

--It is noted that the piezoelectric body 11A as a first piezoelectric body of the invention is identical with the piezoelectric bodies 11B and 11C and the piezoelectric body 11D as a second piezoelectric body of the invention is identical with the piezoelectric body 11E. The piezoelectric body 12A is also identical with the piezoelectric bodies 12B through 12E, so that only the piezoelectric bodies 11A and 11D and the piezoelectric bodies 12A and 12D which are paired with them will be explained below as the representative piezoelectric bodies.

Please replace the paragraph beginning at page 14, line 14, with the following rewritten paragraph:

--Here, the side electrode 32 is connected to the planar electrodes 21b of the piezoelectric bodies 11A through 11C, the side electrode 33 is connected to the reference electrodes 22a and 22b of the piezoelectric bodies 12A through 12E and the side electrode 34 is connected to the planar electrodes 21c of the piezoelectric bodies 11D and 11E. Meanwhile, the side electrode 35 is connected to the planar electrodes 21a of the piezoelectric bodies 11A through 11C and the side electrode 36 is connected to the planar electrodes 21d of the piezoelectric bodies 11D and 11E.--

Q15

Please replace the paragraph beginning at page 15, line 22, with the following rewritten paragraph:

--Here, an electric-mechanical coupling coefficient of the piezoelectric longitudinal effect is greater than that of the piezoelectric transverse effect, and an overall energy efficiency is enhanced by utilizing the piezoelectric longitudinal effect.--

Q16

Please replace the paragraph beginning at page 17, line 15, with the following rewritten paragraph:

--At this time, when the polarized portions 21b of the piezoelectric bodies 11A through 11C and the polarized

Q17

portions 11c of the piezoelectric bodies 11D and 11E contract in the longitudinal direction, for example, it corresponds to stretching of the polarized portions 11a of the piezoelectric bodies 11A through 11C and the polarized portions 11d of the piezoelectric bodies 11D and 11E in the longitudinal direction.--

Please replace the paragraph beginning at page 18, line 24, with the following rewritten paragraph:

--FIGs. 5 and 6 show a second embodiment in which the present invention is applied to an ultrasonic motor, wherein Figs. 5a through 5f show a basic laminating structure of the vibrating body 10 and FIGs. 6a and 6b show disposition of side electrodes.--

Please replace the paragraph beginning at page 19, line 4, with the following rewritten paragraph:

--As shown in FIGs. 5a, 5b, 5e and 5f, the piezoelectric bodies 11A and 11B and the piezoelectric bodies 12A and 12C which are paired with one another are constructed almost in the same manner as in the first embodiment, so that their explanation will be omitted here.--

Please replace the paragraph beginning at page 22, line 8, with the following rewritten paragraph:

--It is also possible to apply different voltages to the respective groups to vary the elliptic vibration drawn by the output fetching member 31.--

Please replace the paragraph beginning at page 22, line 20, with the following rewritten paragraph:

--As shown in FIGs. 7b and 7d, the piezoelectric bodies 12A and 12B which are paired with piezoelectric bodies 14A and 14B are constructed almost in the same manner as in the first embodiment, so that their explanation will be omitted here.--

Please replace the paragraph beginning at page 23, line 1, with the following rewritten paragraph:

--The present embodiment is characterized in that rectangular planes of the piezoelectric bodies 14A and 14B as first and second piezoelectric vibrators are divided into three parts and planar electrodes 24a through 24c and 24d through 24f are fixed corresponding to the respective divided planes 14a through 14c and 14d through 14f as shown in FIGs. 7a and 7c. Then, a polarization process is implemented on the respective divided planes 14a through 14c and 14d through 14f

by setting the front page side thereof as plus and the back side thereof as minus and by applying a voltage exceeding a resistive electric field to the planar electrodes 21a through 21d.--

Please replace the paragraph beginning at page 30, line 16, with the following rewritten paragraph:

--As shown in FIGs. 11b, 11c, 11d and 11f, the present embodiment are constructed almost in the same manner as in the second embodiment, so that the explanation on the piezoelectric body 13A, piezoelectric bodies 12A, 12B and 12C will be omitted here.--

a23

Please replace the paragraph beginning at page 34, line 1, with the following rewritten paragraph:

--While the present embodiment is constructed almost in the same manner as in the first embodiment, it is characterized in that the vibrating body 10 is fixed, a pair of output fetching members 38 and 39 are fixed at the edge portion thereof in the direction vertical to the laminating direction and the output fetching members 38 and 39 are abutted with a moving body 54.--

a24

Please replace the paragraph beginning at page 34, line 22, with the following rewritten paragraph:

--Here, the vibrating bodies 10A and 10B have the same laminating structure and disposition of electrodes as in the second embodiment and only the stretching vibration, only the bending vibration or the combined elliptic vibration may be produced by selecting the electrodes to which voltage is applied.--

Please replace the paragraph beginning at page 35, line 5, with the following rewritten paragraph:

--The spherical rotor 55 may be moved in triaxial directions by vibrating both vibrating bodies 10A and 10B. At this time, the output fetching members 31A and 31B cause elliptic vibration, respectively. The output fetching member 31A applies frictional force in the direction of rotation about the Z-axis of the spherical rotor 55 and the output fetching member 31B applies frictional force in the direction of rotation about the X-axis of the spherical rotor 55. The spherical rotor 55 rotates about the X and Z-axes in the same time, thus realizing the triaxial movement.--

Please replace the paragraph beginning at page 35, line 19, with the following rewritten paragraph:

--At this time, the output fetching member 31A

applies frictional force to the spherical rotor 55 in the direction of rotation about the Z-axis and the output fetching member 31B stretches and applies force only in the direction of the center of the spherical rotor 55, so that they do not hamper the spherical rotor 55 from rotating about the Z-axis.--

Please replace the paragraph beginning at page 36, line 9, with the following rewritten paragraph:

--The electronic apparatus comprises the above-mentioned vibrating body 10, a moving body 61 moved by the vibrating body 10, a pressurizing mechanism 62 moved by the vibrating body 10, a pressurizing mechanism 62 for applying pressurizing force to the moving body 61 and the vibrating body 10, a transmission mechanism 63 operating in linkage with the moving body 61 and an output mechanism 64 that moves based on the operation of the transmission mechanism 63.--

Please replace the paragraph beginning at page 36, line 16, with the following rewritten paragraph:

--Here, a transmission wheel such as a gear and a frictional gear is used as the transmission mechanism 63. As the output mechanism 64, a shutter driving mechanism and a lens driving mechanism are used in the case of a camera, for

example, a needle driving mechanism and a calendar driving mechanism are used in case of an electronic watch, and a cutter feeding mechanism and a workpiece feeding mechanism are used in case of a work machine.--

Please replace the paragraph beginning at page 37, line 7, with the following rewritten paragraph:

--As described above, according to the invention, the inventive ultrasonic motor is arranged such that the polarized portion of the first piezoelectric body and the polarized portion of the second piezoelectric body stretch respectively in the polarizing direction so that stretching vibration and bending vibration are produced by overlapping the respective vibrations in the longitudinal direction. The output may be increased by utilizing the vibration in the longitudinal direction caused by the piezoelectric longitudinal effect and electrical energy may be utilized very efficiently.--

A30

Please replace the paragraph beginning at page 37, line 24, with the following rewritten paragraph:

--According to the invention, a driving force in both normal and reverse directions may be obtained and the output may be controlled by displacing the bending vibration

A31

or by changing the phase because the elliptic vibration for rotating in the reverse direction is taken out by causing bending vibration having a different phase or by amplifying the bending vibration by exciting the second polarized portion with a phase different from the first polarized portion in the same time.--

Please replace the paragraph beginning at page 38, line 8, with the following rewritten paragraph:

--According to the invention, by providing a third piezoelectric body which vibrates in the same phase with the stretching vibration, the high-output ultrasonic motor may be realized because the stretching vibration is amplified.--

Please replace the paragraph beginning at page 38, line 11, with the following rewritten paragraph:

--According to the invention, by providing a third polarized portion that vibrates in the same phase with the stretching vibration, the high-output ultrasonic motor may be realized because the stretching vibration is amplified.--

Please replace the paragraph beginning at page 38, line 14, with the following rewritten paragraph:

--According to the invention by abutting the moving body to the laminated piezoelectric vibrator in the horizontal